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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/709,008

04/07/2004

Mao-Yi Chang

9003-US-PA

3007

31561

7590

02/04/2005

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

GEYER, SCOTT B

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

CA

Office Action Summary	Application No. 10/709,008	Applicant(s) CHANG, MAO-YI	
	Examiner Scott B. Geyer	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 29 November 2004.

2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-21 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) 1-21 is/are allowed.

6) ☐ Claim(s) _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 07 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a) ☒ All b) ☐ Some * c) ☐ None of:

 1. ☒ Certified copies of the priority documents have been received.

 2. ☐ Certified copies of the priority documents have been received in Application No. _____.

 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>0804</u> .	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species 1 (with claims 1-8 and 16-18 readable thereon) in the reply filed on November 29, 2004 is acknowledged. The traversal is on the ground(s) that "the alleged species (1) and the alleged species (2) of the present invention are neither mutually exclusive, independent nor distinct". The examiner agrees with the applicant on this assertion, and the restriction requirement established in the office action dated October 29, 2004 is hereby withdrawn.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The references cited within the IDS document, submitted by the applicant on August 4, 2004 (paper no. 0804), have been considered.

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4. This application is in condition for allowance except for the following formal matters:

Drawings

4A. The drawings are objected to because of the following informalities:

In figure 2B: change "100" to - - 200 - -;

In figure 3B: change "100" to - - 300 - -;

In figure 3D: change "316" to - - 315 - -.

4B. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4C. The disclosure is objected to because of the following informalities:

Paragraph [0005], line 2: change "panel" to - - panels - -;

Paragraph [0006], line 9: change "well" to - - good - -;

Paragraph [0007], line 4: delete "and therefore";

Paragraph [0023], line "change waybased" to - - way based - -;

Paragraph [0025], line 1: change "in FIG.2C and FIG.2E" to - - in FIG. 2E - -;

Paragraph [0025], line 19: change "grains222" to - - grains 222 - -;

Appropriate correction is required.

Claim Objections

4D. Claim 1 is objected to because of the following informalities:

For claim 1, line 9: insert a comma between "protrusions" and "having"

Appropriate correction is required.

/

Allowable Subject Matter

5. Claims 1-21 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter. The prior art of record and to the examiner's knowledge does not teach or render obvious, at least to the skilled artisan, the instant invention regarding:

6A. The method of making a polysilicon thin film, particularly characterized by forming a solid phase silicon layer having first protrusions on a substrate, wherein the maximum distance from the top of the first protrusions to the substrate is $X1$ and the minimum distance from the top of the first protrusions to the substrate is $Y1$, and combined with a step of reducing the density of the first protrusions, and wherein the relationship $Y1 < Z1 < X1$ exists where $Z1$ is the distance between the top of the protrusions and the substrate after the protrusions have been reduced in density, as recited in claim 1. Claims 2-15 and 21 are dependent upon claim 1.

6B. The method of making a polysilicon thin film, particularly characterized by forming a polysilicon layer having first protrusions on a substrate, wherein the maximum distance from the top of the first protrusions to the substrate is $X1$ and the minimum

distance from the top of the first protrusions to the substrate is Y_1 , and combined with a step of liquidizing an amorphous silicon layer atop the polysilicon layer, such that the first protrusions have a thickness of Z_1 , and wherein the relationship $Y_1 < Z_1 < X_1$ exists, as recited in claim 16. Claims 17 and 18 are dependent upon claim 16.

6C. The method of making a polysilicon thin film, particularly characterized by forming a polysilicon layer having first protrusions on a substrate, wherein the maximum distance from the top of the first protrusions to the substrate is X_2 , and the minimum distance from the top of the first protrusions to the substrate is Y_2 , combined with a step of etching a portion of the polysilicon layer to remove the first protrusions and the polysilicon layer having a thickness of Z_2 , such that $Y_2 < Z_2 < X_2$ exists, as recited in claim 19. Claim 20 is dependent upon claim 19.

7. The following references are cited as being particularly related to the applicant's invention: Yamazaki et al. (2004/020123 A1), Peng (2004/0058076 A1), Chen et al. (2004/0055999), Shih et al. (2004/0038438), Mishima et al. (6,677,222 B1) and Hiraga et al. (6,593,215 B2).

Conclusion

8. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

9. A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott B. Geyer whose telephone number is (571)

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272-1958. The examiner can normally be reached on weekdays, between 10:00am - 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SBG
February 2, 2005

SBG 2/2/05

Michael S. Lebentritt
MICHAEL S. LEBENTRITT
PRIMARY EXAMINER